

AMENDMENTS TO THE DRAWINGS:

A replacement sheet is submitted for Figure 1. The schematic representation of both a control and a thermal break has been added.

REMARKS

This application has been amended so as to place it in condition for allowance at the time of the next Official Action.

The Official Action objects to the drawings for failure to illustrate the "control" of claim 8 and "thermal break" in claim 16. Included with the present amendment is an amended sheet illustrating Figure 1. The substantive changes to Figure 1 consist entirely of the addition of the schematic representation of both a control and a thermal break to the drawing figure. No other substantive changes have been made. As each of the control and the thermal break are described in the application as originally filed, this change does not introduce new matter to the application.

The Official Action requests the addition to headings and sub-headings typically used in U.S. patent practice. The present amendment introduces such headings and sub-headings, as requested.

The Official Action objects to the specification under 35 USC 112, first paragraph. Reconsideration and withdrawal of this objection are respectfully requested for the following reasons:

Applicants have corrected the typographic errors and removed the page reference from the narrative portion of the specification. As to the question of "thermal break",

applicants suggest that it is well known in the art that this term refers to a thermal barrier.

The Official Action rejects claims 1-23 under 35 USC 112, second paragraph, as being indefinite. Reconsideration and withdrawal of this rejection are respectfully requested for the following reasons:

Applicants have amended independent claim 1 to recite an embodiment of the present invention in a form more generally found in U.S. practice. Such amendment is believed to eliminate all of the bases for the present rejection.

The Official Action rejects claims 1, 3, 6-10, 12 and 13 under 35 USC 102(b) as being anticipated by EBERLE 4,458,742. The Official Action separately rejects claims 11 and 14-16 under 103(a) as being unpatentable over the same EBERLE reference.

Applicants have amended independent claims 1 and 17. Applicants have also added new claim 24. Reconsideration and withdrawal of both rejections, as well as favorably consideration of claim 24, are respectfully requested for the following reasons:

The prior art is helpful in understanding the invention as claimed. As can be conveniently seen in Figures 10a-d of EBERLE (using the numbers of the prior art), both the present described embodiments and that of the prior art start with a post 921 inserted in a bush 920 to form the basis of a terminal. Additionally, both appreciate that in order to form

an effective and permanent electrical contact, the two have to be fused together. In order to do this, it is generally recognized that the post and bush must be at least in part melted in order to fuse the post to the bush.

Because material becomes melted, an encircling mold 621 needs to be provided so that when the molten material cools the terminal will have a predetermined shape. For reasons discussed in the present specification, problems can arise due to insufficient or excess material. Also, achieving terminals having both a constant height as well as a level upper surface is difficult.

The arrangement in EBERLE does nothing to handle this problem, but simply provides an upper reservoir to accommodate molten material which is temporarily displaced while the heating probe 730 is pushed into the cavity of the mold 621. When the probe 730 is withdrawn the lead simply flows back to take up whatever height is determined by the quantity of material which was provided by the post 921 and the bush 920.

In contrast, in the present method, the mold cavity is deliberately overfilled by introducing additional lead, so that whatever the volume provided by 921 and 920, there will be sufficient lead to form a terminal of the desired shape and dimension. Further, in order to ensure that oversized terminals are not created, the cavity is then drained back to a specific defined fill. This is the function of the constant height

structure. Applicants respectfully suggest that both the original as well as the new and amended claims clearly define this arrangement.

In the specific embodiment described, the constant height structure takes the form of a weir created in the wall of the mold, the top of the weir being at the level of the intended top of the terminal. This arrangement is particularly convenient because lead can be flowed, tidally, into and out of the mold over the same structure and no moving parts are involved. However, exactly the same effect could be achieved by pumping lead in through a pipe entering the top mouth of the mold and then having a drain formed in the wall of the mold at a particular level. Provided that one supplied the initial shot of lead at a rate which exceeded the draining rate, overfilling would occur, but the mold would then drain down to the level determined by the drain. Such a drain is equally a constant height structure.

The EBERLE reference describes a mold which extends above the desire height of the mold cavity, but it has no mechanism for adjusting the final height of the molten material so as to form a terminal of predetermined height. If one were to overfill EBERLE the mold, one would simply get a terminal which had an inverted frustoconical top as the extra material would solidify in the shape of the extended part of the cavity.

The Official Action explicitly states that claims 2, 4, 5, and 17-23 contain allowable subject matter. Applicants believe that, in light of the amendments and analysis provided above, all claims now in the application are in condition for allowance, and an early indication of the same is respectfully requested.

If the Examiner has any questions or requires further clarification of any of the above points, the Examiner may contact the undersigned attorney so that this application may continue to be expeditiously advanced.

Please charge the fee of \$50 for one extra claim of any type added herewith to Deposit Account No. 25-0120.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

  
Eric Jensen, Reg. No. 37,855  
745 South 23<sup>rd</sup> Street  
Arlington, VA 22202  
Telephone (703) 521-2297  
Telefax (703) 685-0573  
(703) 979-4709

EJ/lrs

APPENDIX:

The Appendix include the following item:

-replacement sheet for Figure 1